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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------|------------------|
| 09 926,600  | 11 26 2001  | Kenji Abiko          | P 21273              | 6604             |
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| GREENBLUM & BERNSTEIN, P.L.C.<br>1950 ROLAND CLARKE PLACE<br>RESTON, VA 20191 |             |                      | EXAMINER             |                  |
|   |             |                      | WILKINS III, HARRY D |                  |
|   |             |                      | ART UNIT             | PAPER NUMBER     |
|   |             |                      | 1742                 | 7                |
| DATE MAILED 06 04 2003  |             |                      |                      |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 09/926,600             | ABIKO, KENJI        |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Harry D Wilkins, III   | 1742                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication
- If the extension period specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 05 May 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 November 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a)
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Newly submitted claims 7-9 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Inventions I (claims 1-6) and II (claims 7-9) are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by another processes, such as the process described in Abiko (JP 08-22589).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 7-9 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

However, as correctly noted by Applicant, should the product claims be found allowable, the method claims would be subject to rejoinder.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujisawa et al (EP 597,129).

Fujisawa et al teach the invention substantially as claimed. Fujisawa et al teach (see abstract) an Fe-Cr alloy containing up to 60 wt% Cr, where the total content of C, N, O, P and S are limited to 100 ppm or less. Fujisawa et al describe (see page 35 in Table 1 (1)) that the contents of: C+N are typically below 40 ppm, with several examples (5, 6 and 11) falling below 20 ppm; O is typically below 30 ppm (the O as an oxide must be less than this value); and, S is typically below 20 ppm.

Fujisawa et al fail to meet the claimed "Cr: exceeding 60 wt%". However, the claimed composition range of Cr would have been obvious to one of ordinary skill in the art because the prior art range is close enough, e.g.- 60 wt% vs. 60.0001 wt% that it would have been expected to have the same properties, see MPEP 2144.05.

Regarding claims 3 and 4, because the alloy of Fujisawa et al is nearly identical in composition, particularly in terms of the impurities C, N, O and S, one of ordinary skill in the art would have expected the alloy of Fujisawa et al to have the same strength-ductility balance as claimed.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shida et al (JP 07-278718) in view of Abiko (JP 08-225899).

Shida et al teach (see English abstract) a Cr-Fe alloy that contains at least 70% Cr (by weight, see Table 1, page 4) with reduced N and O impurities.

However, Shida et al do not teach limiting C+N to less than 20 ppm, S to less than 20 ppm and O to less than 100 ppm, with O as oxides at less than 50 ppm.

Abiko teaches (see English abstract) a method of making an alloy that produces very low amounts of gaseous impurities. Abiko teaches (see paragraph 9) that Cgi is the total quantity of the gas constituents in weight ppm. Abiko teaches (see paragraph 17) that the gas constituents are C, N, S and O. Abiko teaches (see Table 1) several Fe-Cr alloys that have Cgi (5<sup>th</sup> column) of 9.1 ppm, 15.0 ppm and 18.5 ppm. Therefore, one of ordinary skill in the art would have expected the method of Abiko to reduce the amount of C, N, S and O to below 20 ppm total (thus, meeting each of the ranges for C+N, S and O as claimed). Abiko teaches (see English abstract) that the plastic workability of alloys can be improved by the reduction of Cgi.

Therefore, it would have been obvious to one of ordinary skill in the art to have applied the method of making taught by Abiko to the alloy of Shida et al because Abiko teaches that the reduced Cgi improves the workability of Fe-Cr alloys. The method of making produces the lowered amounts of C, N, S and O in the Fe-Cr alloys, thus allowing the alloy of Shida et al to meet the present compositional claim limitations.

Regarding claim 2, Shida et al teaches an alloy with at least 70 wt% Cr.

Regarding claims 3, 4, 5 and 6, because the alloy of Shida et al in view of Abiko is identical in composition, particularly in terms of the impurities C, N, O and S, one of ordinary skill in the art would have expected the alloy of Shida et al in view of Abiko to have the same strength-ductility balance as claimed.

***Response to Arguments***

5. Applicant's arguments filed 5 May 2003 have been fully considered but they are not persuasive. Applicant argued that:

- a. Fujisawa et al teach away from the present invention;
- b. Fujisawa et al do not teach the high temperature properties of the alloy;
- c. Shida et al do not teach an alloy which is worked after casting and do not teach the high temperature properties of the alloy;
- d. Abiko teaches away from the present invention;
- e. It would not have been obvious to one of ordinary skill in the art to have reduced the amount of N and O in the alloy of Shida et al because of the large differences in the amounts; and,
- f. Abiko does not teach the high temperature properties of the alloy.

In response to Applicant's first argument, Fujisawa et al indeed teach away from increasing the amount of Cr above 60 wt%, however, this value is so close to the presently claimed range, that one of ordinary skill in the art would have expected the two alloys to have the same properties. See MPEP 2144.05. Note that the rejection of claims 2, 5 and 6 has been withdrawn due to the teachings against increasing above 60 wt%, thus not providing motivation to have at least 65 wt% Cr.

In response to Applicant's second argument, with respect to the high temperature properties of the alloy, the alloy composition taught by Fujisawa et al is close enough to the alloy composition recited in the claims that one of ordinary skill in the art would have expected that the products taught by the reference would have the same high temperature properties as claimed.

"Where the claimed and prior art products are identical or substantially identical in structure or composition or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing they are not.' In re Spada, 15 USPQ2d 1655, 168 (Fed.

Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best* 195 USPQ 430, 433 (CCPA 1977)." See MPEP 2112.01.

In response to Applicant's third argument, though Shida et al do not teach any working step after the casting of the alloy, the present claim does not require the composition to be in a wrought form. With respect to the high temperature properties of the alloy, the alloy composition taught by Fujisawa et al in view of Abiko overlaps the alloy composition recited in the claims such that one of ordinary skill in the art would have expected that the products taught by the reference would have the same high temperature properties as claimed.

In response to Applicant's fourth argument, though Abiko teaches limiting the Cr to only 60 wt%, it is merely for economic reasons. Also, regarding the example in Abiko that contains 50 wt% Cr, Applicant is reminded that the disclosure of the prior art should not be construed as being limited only to the specific examples contained therein. See *In re Fracalossi* 215 USPQ 569 (CCPA 1982). Because the only reason given for limiting the Cr to 60 wt% is to avoid excessive costs, and Shida et al teach the advantages of having at least 70 wt% Cr, Abiko does not teach away from increasing Cr above 60 wt% when combined with Shida et al.

In response to Applicant's fifth argument, though the specific examples of Shida et al contain as little as 1000 or 900 ppm N or O, the actual teaching of Shida et al (see English abstract) is to limit the N and O content below 2000 ppm, which would include the presently claimed range. Thus, the scope of Shida et al does include reducing the impurities to very low levels (such as below 20 ppm as taught by Abiko). Thus, one of

ordinary skill in the art would not have considered it unobvious to reduce the N and O, as well as C and S, as taught by Abiko in the alloy of Shida et al.

In response to Applicant's sixth argument, with respect to the high temperature properties of the alloy, the alloy composition taught by Shida et al in view of Abiko overlaps the alloy composition recited in the claims such that one of ordinary skill in the art would have expected that the products taught by the reference would have the same high temperature properties as claimed.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 703-305-9927. The examiner can normally be reached on M-Th 10:00am-8:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Harry D Wilkins, III  
Examiner  
Art Unit 1742

hdw  
June 2, 2003

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